

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph no. 0037 on page 8 with the following amended paragraph:

The processor ~~20~~ 30 saves the training instance 1000 in memory 20 and activates the prosodic feature determination routine or circuit 40. The prosodic feature determination routine or circuit 40 determines prosodic features in the training instance 1000 such as initial frequency, pitch range, duration, pauses, boundary tones, number of intonational phrases and the like. In various other exemplary embodiments according to this invention, the prosodic feature determination routine or circuit 40 may be a digital signal processor embedded within the automatic speech recognition system. The prosodic feature determination circuit or routine 40 determines the prosodic features of the speech utterances and encodes them as annotations within the recognized speech utterances.

Please replace paragraph nos. 0043 and 0044 with the following amended paragraphs:

[0043] FIG. 5 shows exemplary prosodic feature information for prosodic features I.sub.1-I.sub.8 associated with the first exemplary sentence according to this invention. The prosody information associated with a statistically significant number of training sentences is used to determine predictive models of discourse functions. That is, in various exemplary embodiments according to this invention, a predictive model is determined that indicates probable discourse function classifications for segments of natural language speech based on the prosody information identified in the speech. In various other exemplary embodiments according to this invention, the predictive models of discourse functions model are used to refine the discourse level segmentation of the natural language speech.

[0044] For example, as shown in FIG. 5, the first exemplary training phrase "Here's a new email. It's to Mark M-A-R-K Famiglio F-A-M-I-G-L-I-O" is segmented into the command discourse function "Here's a new mail It's to" and the content discourse function "Mark M-A-R-K Famiglio F-A-M-I-G-L-I-O." The terms command and content are merely illustrative and not limiting. Any discourse function identifiable by a theory of discourse analysis and associated with identifiable prosodic features may be used in the practice of this invention. After the exemplary sentence has been segmented into constituent discourse function units, the prosodic features J.sub.1-J.sub.3 831-833 in the speech utterances associated with the exemplary training sentence are determined. In various exemplary embodiments, the values for the set of prosodic features associated with a discourse function are combined to form a single prosodic feature vector. This process is repeated for each discourse function identified in the training corpus of speech utterances. In various embodiments, the prosodic feature vector and the determined discourse functions are used to determine a predictive model based on machine learning, statistics and the like.